BLM Interim XML Procedures

Technical Specifications
Programs and projects shall make use of World Wide Web Consortium (W3C) XML technical specifications holding *Recommended* status. To ensure maximum interoperability, programs and projects must use only software that implements W3C technical specifications holding *Recommended* status. The project sponsor and BLM Technical Review Board (TRB) must approve any deviation from this policy.

Programs and projects should also make use of XML-related standards promulgated by other nationally or internationally accredited standards bodies when developing applications with the domain such standards bodies address. These standards bodies include the International Organization for Standardization (ISO), the Institute for Electrical and Electronic Engineers (IEEE), the American National Standards Institute (ANSI), the Organization for the Advancement of Structured Information Standards (OASIS), the United Nations/Centre for Trade Facilitation and Electronic Business (UN/CEFACT), and the Internet Engineering Task Force (IETF). When an XML standard produced by one of these standards organizations conflicts with a standard promulgated by the W3C, the W3C standard shall take precedence.

Proprietary Extensions
BLM production XML implementations shall not use proprietary extensions to XML-based specifications unless the system owner and the BLM TRB approve the use of such extensions.

Standards Participation
Active participation in the work of appropriate XML and XML-related technical and business standards bodies is encouraged.

XML Standard Components
When developing XML vocabularies and schemas, existing and proven standards-based XML components shall be used when practical rather than developing new XML components. When selecting existing components, BLM programs and projects should adhere to the following order of precedence (highest to lowest):

1. W3C or appropriate national or international consensus standards
2. Federal standards
3. Department of the Interior standards
4. BLM Bureau-wide standards

Programs and projects developing BLM specific vocabularies and schemas must follow the guidance in the *Draft Federal XML Developer's Guide* (Reference 1).

XML Application Development
All XML application development in BLM shall adhere to the guidance provided in the draft *E-Gov Enterprise Architecture Guidance (Common Reference Model)* (Reference 2) and the *BLM Enterprise Architecture Technical Reference Model* (Reference 3). The system owner and the TRB must approve any exceptions to following the guidance provided in these two documents. All new development and modifications to legacy XML implementations shall adhere to the rules and guidelines contained in these documents.

XML Enterprise Management
It is BLM policy to advocate, support, and ensure the discovery, development, registration, maintenance, and reuse of standard XML within programs and projects across the Bureau.

XML Registration
All XML components and schema used in the Bureau must be registered in the appropriate registry or clearinghouse depending on its scope of use (i.e., publicly registered if used to conduct business with the public).

References

1. U.S. Federal CIO Council, Enterprise Interoperability and Emerging Information Technology Committee, XML Working Group, *Draft Federal XML Developer's Guide*, April 2002.
   Source: http://xml.gov/documents/in_progress/developersguide.pdf

2. U.S. Federal CIO Council, Architecture and Infrastructure Committee, Federal Enterprise Architecture Working Group, *E-Gov Enterprise Architecture Guidance (Common Reference Model), Draft-Version 2*, July 25, 2002
   Source:
   http://www.feapmo.gov/resources/E-Gov_Guidance_Final_Draft_v2.0.pdf

3. U.S. Department of the Interior, Bureau of Land Management, *BLM Enterprise Architecture Technical Reference Model, Volume 1 Revision 2*, November 2002
   Source: http://web.blm.gov/bea/documents/TRMVol1Rev2.ZIP

Glossary

A

ANSI—The American National Standards Institute (ANSI) is a private, non-profit organization (501(c)3) that administers and coordinates the U.S. voluntary standardization and conformity assessment system. [From the ANSI web site at http://www.ansi.org]

B

BEA —The BLM Enterprise Architecture (BEA) is about the work that the BLM does and the information that we use to accomplish the work. Structurally, the BEA is a management framework that describes:

- "What" needs to happen rather than "how" it should happen;
- The business rules and processes (including information and data) required to operate the organization that are independent of any specific organizational structure, technology, or existing systems;
- The hardware and software needed in basic operations of the BLM

[From the BEA homepage at http://web.blm.gov/bea/index.htm]

I

IEEE—The IEEE (Eye-triple-E) is a non-profit, technical professional association of more than 377,000 individual members in 150 countries. The full name is the Institute of Electrical and Electronics Engineers, Inc., although the organization is most popularly known and referred to by the letters I-E-E-E.

Through its members, the IEEE is a leading authority in technical areas ranging from computer engineering, biomedical technology and telecommunications, to electric power, aerospace and consumer electronics, among others. [From the IEEE web site at http://www.ieee.org/portal/index.jsp]

IETF—The Internet Engineering Task Force (IETF) is a large open international community of network designers, operators, vendors, and researchers concerned with the evolution of the Internet architecture and the smooth operation of the Internet. It is open to any interested individual.

The actual technical work of the IETF is done in its working groups, which are organized by topic into several areas (e.g., routing, transport, security, etc.). [From the IETF web site at http://www.ietf.org/]

ISO—The International Organization for Standardization (ISO) is a worldwide federation of national standards bodies from more than 140 countries, one from each country.

ISO is a non-governmental organization established in 1947. The mission of ISO is to promote the development of standardization and related activities in the world with a view to facilitating the international exchange of goods and services, and to developing cooperation in the spheres of intellectual, scientific, technological and economic activity.

ISO's work results in international agreements that are published as International Standards. [From the ISO web site at http://www.iso.ch/iso/en/ISOOnline.frontpage]

O

OASIS—The Organization for the Advancement of Structured Information Standards (OASIS) is a not-for-profit, global consortium that drives the development, convergence and adoption of e-business standards. Members themselves set the OASIS technical agenda, using a lightweight, open process expressly designed to promote industry consensus and unite disparate efforts. OASIS produces worldwide standards for security, Web services, XML conformance, business transactions, electronic publishing, topic maps and interoperability within and between marketplaces. [From the OASIS web site at http://www.oasis-open.org/]

S

SGML—The Standard Generalized Markup Language [ISO 8879]. SGML is the parent of both HTML and XML.

T

TRB—The BLM Technical Review Board (TRB) is the governing Bureau of Land Management (BLM) entity that facilitates the on-going development of the Information Technology Architecture (ITA) and determines technical conformance to the ITA as defined in the Technical Reference Model (TRM). The TRB identifies and facilitates ITA components for update and/or modification in the TRM.

The board serves as the forum for adjudicating architectural compliance issues resulting from architectural project reviews prior to project presentation to the Information Technology Investment Board (ITIB) related to national information systems and technology implementation. The TRB provides input to the Select and emphasis on Control aspects of the BLM's Select-Control-Evaluate (SCE) process. In this role, the TRB will monitor architectural compliance, arbitrate technical and standards compliance, and review and recommend waivers and exception requests to the Chief Information Officer (CIO). [From the TRB charter at http://www.blm.gov/nhp/efoia/wo/fy02/im2002-036.html]

U

UN/CEFACT—The United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) is open to participation from Member States, intergovernmental organizations, and sectoral and industry associations recognized by the Economic and Social Council of the United Nations (ECOSOC). The Centre's objective is to be "inclusive" and it actively encourages organizations to contribute and help develop its recommendations and standards.

The participation of many private-sector associations in UN/CEFACT's work at the policy level, and of hundreds of private-sector technical experts in UN/CEFACT working groups, is a unique feature of the Centre which is forging new cooperative relationships between private business and public organizations.

The mission of UN/CEFACT is to improve the ability of business, trade, and administrative organizations, from developed, developing, and transitional economies, to exchange products and relevant services efficiently - and so contribute to the growth of global commerce. The focus of UN/CEFACT is to facilitate international transactions, through the simplification and harmonization of procedures and information flows. [From the UN/CEFACT website at http:www.unece.org/cefact/]

W

(W3C) XML Schema—A schema written in accordance with the W3C XML Schema language. [From the W3C Schema page] "XML Schemas express shared vocabularies and allow machines to carry out rules made by people. They provide a means for defining the structure, content, and semantics of XML documents. The XML Activity Statement explains the W3C's work on this topic in more detail." The W3C XML Schema language is described in three recommendations: XML Schema Part 0: Primer, XML Schema Part 1: Structures, and XML Schema Part 2: Datatypes.

X

XML—[From the XML 1.0 specification] "Extensible Markup Language, abbreviated XML, describes a class of data objects called XML documents and partially describes the behavior of computer programs which process them. XML is an application profile or restricted form of SGML. By construction, XML documents are conforming SGML documents." The XML 1.0 specification is a W3C Recommendation.

XML Component—A generic term used to refer to XML elements, attributes, and XML Schema type definitions.

XML Grammar/Vocabulary—Related terms often used synonymously to indicate a set of element and attribute names and the structures described by a schema or set of related schemas that employ the elements and attributes. More precisely, the term "vocabulary" implies a commonly defined set of elements and attributes, while grammar refers to the composition of the vocabulary into meaningful business documents by one or more related schemas. An XML Namespace may be used to describe a vocabulary, while a schema may employ vocabulary from a single or multiple XML Namespaces.

XML Namespace—An XML Namespace is a conceptual "space" to which element and attribute names may be assigned. An XML Namespace is declared within an XML instance by assigning a URI reference and an optional qualification prefix to an element. The element and all its children are considered to be "in" the XML Namespace unless specifically qualified with another Namespace's prefix. The URI reference does not have to have an associated document physically at the URI. Within an XML Schema; the 'targetNamespace' attribute may be used to indicate that all elements declared within the schema are to be treated as "in" the target Namespace. The W3C Recommendation Namespaces in XML provides the full specification for XML Namespaces. Note: Federal XML Namespaces may use XML Namespaces, but the two terms are not synonymous.